



Integrated Pest Management Program

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UConn Extension

Small Fruit Update: June 22, 2022

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Fruit Production & IPM

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Do biopesticides work? Can they effectively control insect and disease pests? Which ones? On which crops? The Microsoft Excel spreadsheets (click on the link below) summarize research done at universities to answer these questions.

Check out this link from Cornell's IPM program

<https://nysipm.cornell.edu/environment/biocontrol/biocontrol-resources/biopesticide-efficacy-summaries/>

Brambles: Summer raspberry harvest is underway and looks good so far. This is earlier than normal but welcomed now that strawberry harvest will be winding down for those farms that do not grow Malwina. Damp weather, either from rain or dew, will trigger botrytis gray mold infections. Maintain fungicide coverage. For a list of options: <https://ag.umass.edu/fruit/new-small-fruit-management-guide/brambles/table-45-summer-bearing-bramble-pest-management-table>

At the same time, make sure bramble canes are spaced out for optimum air circulation and sunlight penetration to facilitate quicker drying out. Make sure weeds are under control – weed growth within the fruiting canopy increases gray mold problems.

Weeds also compete very effectively for water and nutrients resulting in poor bramble cane growth, as you can see in the picture. These brambles are only about 18" tall.



Blueberries: Mummyberry infections, both shoot infections (primary) and fruit infections (secondary), are showing up. This picture shows the typical ‘pumpkin’ appearance of fruit infections before the fruit mummifies. Blueray is one of the highly susceptible varieties. Bluejay, Burlington, Darrow, Duke, Elliott, Lateblue, Northblue and Northsky have resistance.



This fungus will overwinter in the mummified berries on the ground. In spring just as forsythia begin to bloom, the



Photo: A. Schilder, MSU

spores mature and, when there is moisture, the spores will be released, causing primary infections of leaves and shoots.

Secondary infections occur when pollinators move the spores to the flowers resulting in fruit infections.

Be prepared for infections next year if you are seeing symptoms this year – you will have a high amount of inoculum. Apply a couple inches of mulch in the spring before forsythia blooms, to cover up overwintering mummified fruit. Fungicide applications should be aimed for pre-bloom against shoot infections and bloom for fruit infections. Fungicide applications at this point in the season are not effective.

Strawberry renovation: Strawberry plants send out many runners and the beds tend to sprawl into the walkway. In addition, botrytis as well as foliar diseases (see picture) gained a foothold in the planting and need to be eliminated along with several insects that tend to buildup on the older foliage such as 2 spotted spider mites. Renovation also stimulates new runner formation which translates into a higher yield potential for next year. Plan to complete renovating by the middle of July.

Renovation involves:

- (1) Mowing off the tops of the plants without hitting the crowns. This removes diseased and insect infested foliage. Mowing shreds leaves which speeds up their breakdown.
- (2) Narrowing the beds to 12” with a rototiller or cultivator to regain a walkway, improve air circulation and sunlight penetration. This will also remove excess runners.
- (3) Thinning plants where needed for improved sunlight penetration and air circulation. Some beds have gotten too thick and even after narrowing the row, the plants left are just too many. Year old plantings are fine. Thinning is usually not needed until they are 3 years of age or older (yes, some growers keep strawberry fields longer)

- (4) Applying fertilizers, and in particular nitrogen. Apply 30-50 lbs. actual nitrogen/acre at renovation time, followed by another 30-40 lbs. actual nitrogen/acre in late August. Urea is the cheapest form of nitrogen. However, based on your soil and foliar analysis, other nutrients may also be applied at this time. Without benefit of an analysis, a complete fertilizer is another option. There are many organic sources high in nitrogen including nitrate of soda at 16%, fish meal at 14% and dried blood at 12%.
- (5) Weed management. Both pre- and post-emergent herbicides may be applied **prior** to renovation for problem weeds. Immediately after mowing, a pre-emergent herbicide should be applied. For organic growers, there are contact burn-down herbicides available for emerged weeds after mowing. Be very careful not to hit the strawberry foliage with a burn-down material – organic or non-organic. Cultivation throughout the summer will help manage weed problems being careful not to cultivate too deeply close to the plant to avoid root damage.
- (6) 1”-2” of water per week in the form of rainfall or irrigation is needed to push new plant growth, move nutrients within the soil, and avoid plant stress.

Should you renovate your **day-neutral strawberry** beds? The answer is no. They do not produce many runners, the beds tend to remain narrow, and if you mow them off after the early summer crop you may not see much of a fall crop. True, they get foliar diseases and insects just as easily as June bearers do and mowing would help with that problem, but the downside isn't worth it. Day-neutrals do have higher nutrient needs than June bearers simply because they are producing 2-3 crops per season. Apply 30 lbs. nitrogen/acre in monthly applications during the growing season. Potassium and boron are also important nutrients that day-neutral strawberries need and should be added based on your soil and foliar analysis. Phosphorus is rarely needed after establishment and in soils already with an ample supply.

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